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(54) Title: A METHOD AND APPARATUS FOR AUTOMATIC FOCUSING OF A CONFOCAL LASER MICROSCOPE

(57) Abstract

Microscope system (100) moves a target (112) in a first direction relative to a low power objective lens (110) and, during the relative motion, generates and records values of an electronic focus signal that depends on the magnitude of light (123R) reflected by the target (112). A host workstation (116) calculates a first estimate of "focus position" of target (112) at which microscope system (100) is focused, by a median point method. In the median point method, host workstation (116) calculates the sum of the recorded values and determines the position along the range of motion at which half of this sum was exceeded, to be a first estimate of the focus position. From the intensity values of the first pass, optimal sensor gain is set for subsequent passes. Second and third estimates of the focus position can be calculated in a similar manner if necessary and the target is moved to the most recent estimate of the focus position.